

CLAIMS

1. Polypropylene fiber for cement reinforcement, comprising:

fibers spun out of polypropylene resin, said fibers having undergone a surface modification treatment selected between oxidation treatment and fluorination treatment so that a
5 fiber surface has an index of wetting of 38 dyn/cm or more.

2. Polypropylene fibers for cement reinforcement, comprising:

monofilament spun out of polypropylene resin, said monofilament having single yarn fineness of 200 dt or more with irregularities on their surfaces, and having undergone a surface
10 modification treatment selected between oxidation treatment and fluorination treatment so that a monofilament surface has an index of wetting of 38 dyn/cm or more.

3. Polypropylene fibers for cement reinforcement of claim 1 or claim 2,

wherein the oxidation treatment is selected between corona discharge treatment and
15 plasma treatment so that a fiber surface has an index of wetting within the range of 40 to 90 dyn/cm after the treatment.

4. Polypropylene fibers for cement reinforcement of claim 1 or claim 2,

wherein the fluorination treatment is conducted under fluorine gas in a concentration
20 within the range of 5 to 40 % by volume so that a fiber surface has an index of wetting within the range of 50 to 90 dyn/cm after the treatment.

5. Molded cement, comprising:

cement composition having an adequate amount of polypropylene fiber of claim 1
25 added to mortar mixture including cement, fine aggregate and water.

6. Method of constructing concrete structure which comprises mixing a fixed amount of polypropylene fiber of claim 2 to concrete mixture including cement, fine aggregate, rough aggregate and water.

7. Method of spray concreting which comprises mixing an adequate amount of polypropylene fiber of claim 2 to concrete mixture including cement, fine aggregate, rough aggregate and water, spraying the mixture on a formation surface in a fixed thickness.